

IMPROVED METHODOLOGY TO VALIDATE ENDOTOXIN LEVELS IN INHIBITORY AGRICULTURAL SAMPLES

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Endotoxins are lipopolysaccharide-protein complexes that are integral parts of the outer membrane of gram-negative bacteria. They are ubiquitous in the agricultural environment, both in bulk material and airborne dusts. Because endotoxins can exert profound effects on humans after exposure, it is important to quantify their presence in agricultural workplaces. However, certain agricultural materials cause inhibition or enhancement of endotoxin analyses. In this study, an improved methodology was used to validate the endotoxin levels and overcome inhibition due to agricultural samples. Settled dusts and litters from chicken houses were extracted in water by standard technique. Endotoxin analyses were performed on 31 samples in duplicate using the kinetic *Limulus* amoebocyte lysate assay. Product inhibition was found in 27 of the 31 samples (87 percent), which indicates that lower than actual levels of endotoxins may be reported erroneously. Through the use of a new methodology that includes serial dilution followed by spiking with known concentrations of endotoxin standards, comparisons between values in spiked and unspiked dilutions by a computer-enhanced kinetic plate reader are generated. With these data, the proper levels of endotoxin in the samples were determined. This improved capability should have a positive impact on future studies of endotoxins in agricultural materials.

**EFFECTS OF AIRBORNE CONTAMINANTS IN SWINE
CONTAMINANTS IN SWINE CONFINEMENT BUILDINGS ON
ACUTE CHANGES IN LUNG FUNCTION IN SWINE FARMERS**



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Dust, endotoxin, ammonia and carbon dioxide were measured in 25 swine confinement buildings and lung function tests were conducted before work and every 2 hours subsequently on 52 swine farmers working in the buildings. Swine farmers had 8.7 ± 6.8 swine farming years and 4.3 ± 2.3 work-hours per day. Values for forced vital capacity (FVC), forced expiratory volume in one second (FEV1) and maximum mid-expiratory flow rate (MMFR) in these farmers were significantly lower after 2, 4, 6 and 8 hours of work than at baseline ($p < 0.05$). Average shift changes during the day were: -3.98 ± 6.18 percent for FVC, -6.07 ± 6.14 percent for FEV1, $-2.06 \pm .42$ percent for FEV1/FVC and -12.14 ± 11.17 percent for MMFR. Male swine farmers had significantly greater shift changes than did female swine farmers ($p < 0.05$). Swine farmers with acute cough, acute chest tightness and chronic cough symptoms had greater shift changes in FEV1 than those without these symptoms ($p < 0.05$). Multiple regression analysis showed that endotoxin, total dust, number of swine per farm, swine farming years, grain farming years and mask wearing were associated with the shift changes in FEV1 in non-smoking swine farmers. We conclude that swine farming is associated with acute reductions in lung function which are related to exposures to airborne contaminants in confinement buildings. (Supported by Health and Welfare Canada and the Saskatchewan Lung Association).

THE NIOSH AGRICULTURAL HEALTH PROMOTION SYSTEM PROGRAM IN WISCONSIN

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Wisconsin's program now has three primary goals: 1) Training for extension agents that improves the quality and timeliness of information they have on hand in county offices; 2) Epidemiologic Surveillance to increase understanding of health and hazards; and 3) Injury Control Intervention via an inspection and consultation program. The extension agent training is delivered through continuing and professional education sessions and is supplemented by a comprehensive resource guide in each county office. Each office also has an electronic mail information service linking agents with each other and with experts. These new features are intended to improve the technical content of informational exchanges between agents and their clients. The training improvements are being evaluated with a baseline and follow-up survey of agents that asks about their current activities, individual perceptions and needs in the farm health and safety area. Surveillance data will be collected from farmers on occupational injuries and illnesses in collaboration with the Wisconsin Agricultural Statistics Service. Surveillance projects are planned for traumatic injuries, chronic musculoskeletal disorders, and diseases associated with adverse agricultural chemical exposures. The surveys will be administered to a representative probability of Wisconsin farmers and will pay special attention to quantifying exposures to machinery and equipment and other injury, ergonomic and chemical hazards. Research in other injury control fields indicates that conventional safety training may be of limited or questionable effectiveness for improving subsequent injury and illness experience. We are planning a farm safety inspection and consultation intervention program that will focus attention on easily remedied, yet common and important farm hazards. The on-site intervention will collect inspection data on hazards and then inform and persuade individual farm operators to make lowcost, one-time changes that will permanently improve safety and health. We will test the effectiveness of the inspection and consultation program in reducing hazards with follow-up inspections and investigate the influence of material incentives. As incentives, the pilot will include insurance refunds for documented reductions in risk. Wisconsin extension agents have also developed and successfully conducted brief safety inspections using volunteers and youth in two counties.

AN ANALYSIS OF SUICIDE AMONG FARMERS IN FIVE NORTH CENTRAL STATES, 1980-1988



By Paul D. Gunderson, Ph.D.
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The farm media has repeatedly carried stories about individuals who, given the plight of the farm economy, commit suicide. Unfortunately, these anecdotes are not placed within an original schema which might detail the degree of risk experienced by farmers as a whole. Accordingly, five states (Minnesota, Montana, North Dakota, South Dakota and Wisconsin) were chosen for this analysis. Since suicide is typically a rare event, the years chosen for surveillance began in 1980 and ended in 1988. All deaths that occurred within the surveillance period constituted the universe, now 101,000 events per annum; subsequently, only those cases in which the cause of death was classified on the death certificate as "suicide" or "undetermined" and which met specific residence and occupational criteria were retained. Four populations were "at risk" for suicide: farmers, farm women, farm workers, and children and adolescents. The rate of suicide among farmers varied by state from 41 to 61 events per 100,000 farmers at risk. The rates for farm workers and farm women were much lower, 3-5 and 1-2 events per 100,000 respectively. Most farmers, farm workers, and children and adolescents who committed suicide were male and white. A farmer at risk of suicide was typically 63 years of age; a farm woman, 47 years of age; a farm worker, 37 years of age; and an adolescent's median age of death resulting from suicide was 18 years. Wisconsin and Montana reported proportionately more deaths of farmers due to suicide; Minnesota, North and South Dakota, fewer deaths. Most victims chose firearms or poisoning by gas as the suicide method. While women, children and adolescents who reside/work on farms are at low risk, farmers are one-and-one-half to two times more likely to commit suicide than their white male counterparts, suggesting need for targeted interventions.

FARM INJURY SURVEILLANCE

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The Surgeon General's *Year 2000 Objectives for the Nation* include a target of 8 cases per 100 full-time farm workers of work-related injuries resulting in medical treatment, lost time from work, or restricted work activity. There may be major obstacles to monitoring our progress toward that goal. Although farming is among the most hazardous of all occupations, the methods used for traditional occupational health and safety surveillance are of little use in the surveillance of farm injuries. Many national data sources, such as the Bureau of Labor Statistics and Occupational Safety and Health Administration, have virtually no data on farm operations employing fewer than eleven workers; fewer than four percent of the farm operations in the United States qualify for inclusion in those databases. Similarly, virtually none of the state-based Worker's Compensation programs covers family farming operations or includes data from small farms in their records. Because of the importance of farm injuries and the paucity of available data, it is necessary to develop special methods to monitor the occurrence of farm injuries. At this table we will discuss various methods that have been successfully used for farm injury surveillance, including telephone surveys and health care provider-based surveillance systems. We will also discuss other relevant approaches, including mortality surveillance through death certificates and newspaper clipping services. The uniqueness of agriculture, with literally millions of work sites each with an average of only a few workers, poses unique methodologic challenges for occupational injury surveillance. With care, adequate farm injury surveillance systems can be developed. Such systems will be necessary to monitor the high rate of injuries in agriculture and to evaluate the effectiveness of interventions designed to reduce the hazards of farming.

ORGANIC DUST TOXIC SYNDROME: CLINICAL AND LABORATORY EVALUATION OF A CLUSTER OF CASES

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Eleven male workers, aged 15-60 years, moved 800 bushels of oats from a poorly ventilated storage bin in Alabama. The oats were reported to contain pockets of white, powdery dust. Work conditions were described as extremely dusty, and all workers wore single-strap, disposable masks while inside the bin. The workers shoveled the oats for 8 hours in groups of two or three for shifts of 20 to 30 minutes. Two workers remained outside the storage bin and developed no symptoms. Within 4 to 12 hours, all nine who worked inside the bin became ill with fever/chills, chest discomfort, and weakness/fatigue. Eight reported shortness of breath, six had non-productive cough, five complained of myalgias, and four developed headache. Six sought physician attention within the first 2 days of symptoms. Reported abnormal physical signs included: temperature greater than 38.0°C in two, crackles in two, and wheeze in one. Chest radiographs were normal by B-reader review in all six. Symptoms resolved in all affected workers in 2 to 12 days (median 4). Samples of bulk oats and sera from 10 workers were collected. Airborne dust generated in the laboratory from the bulk oats contained 39.5 mg/m³ of respirable dust and the following concentrations of viable organisms (cfu/m³): 1.4x10⁵ total bacteria, 1.5x10³ gram negative bacteria, 1.8x10⁵ thermophilic actinomycetes and 8.3x10⁴ fungi (12 species). Endotoxin content in the airborne dust was 325.7 endotoxin units/mg. Serologic testing for antibodies to an aqueous extract of the bulk oats, to nine standard hypersensitivity pneumonitis antigens, and to aqueous extracts of the fungal isolates failed to separate ill from asymptomatic workers. Despite the initial clinical diagnosis of farmer's lung disease, the clustering of illness experienced by these workers is typical of organic dust toxic syndrome related to inhalation of high concentrations of organic dust contaminated with microbial organisms and their products.

FFA POSTERS

Seven outstanding FFA chapters were selected to present posters at the Surgeon General's Conference on Agricultural Safety and Health in 1991, and another seven from different states were selected to present posters at the Center for Agricultural Disease and Injury Research, Education, and Prevention Regional Conference in Iowa City in 1992. These selections were made from among winners of the FFA National Chapter Safety Award Program, and they recognize an ongoing activity that addresses community approaches to preventing agriculture-related diseases and injuries. Chapters were selected for geographic balance, addressing farm safety and health issues, completion of a community assessment, and selecting unique prevention targets within the community. Poster abstracts of these 14 national winners are presented on the following pages:

1990 FFA Chapter Winners

Paramount High, Alabama
 Southwestern-Hanover, Indiana
 Stockton, Missouri
 Amanda-Clearcreek, Ohio
 Ysleta, Texas
 Park View Senior, Virginia
 Elma, Washington

1991 FFA Chapter Winners

Platte Valley, Colorado
 Lake Placid, Florida
 Newton County, Georgia
 Cascade, Iowa
 Verdigre, Nebraska
 Rolette, North Dakota
 New Auburn, Wisconsin

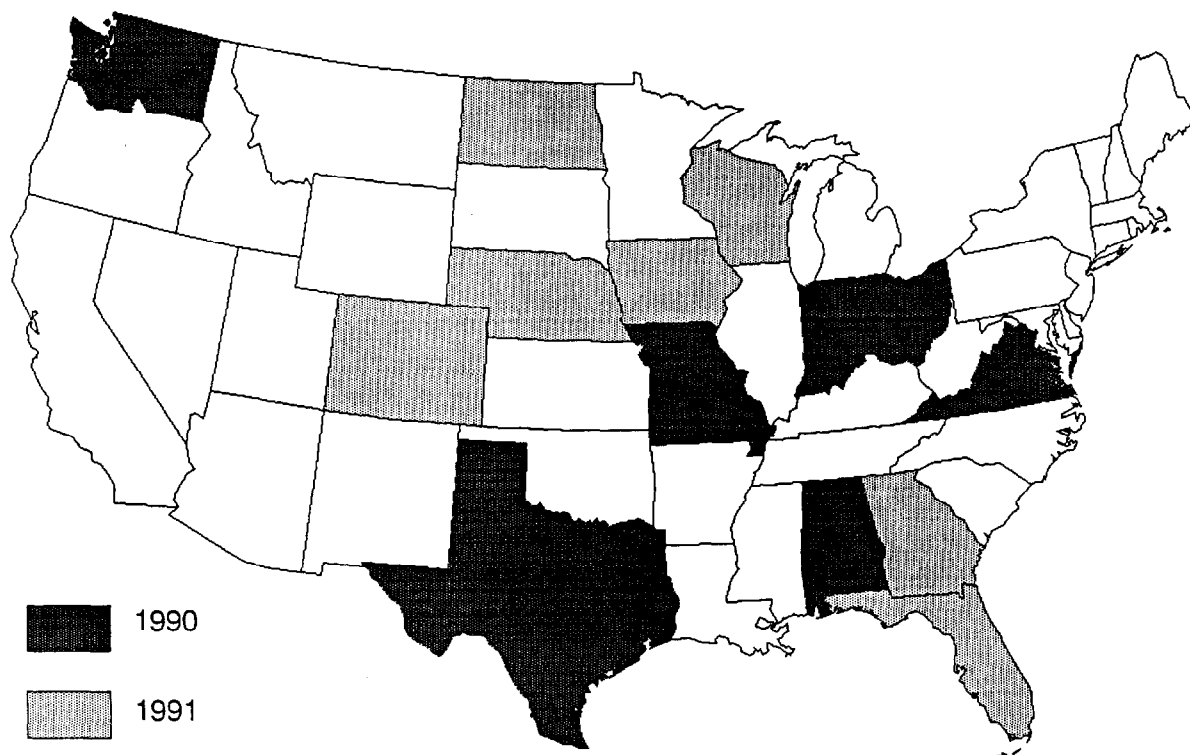


Figure 1. States Represented by National FFA Chapter Safety Award Program Winners.

MAKING OUR HOME, SCHOOL AND COMMUNITY SAFER PLACES TO LIVE AND WORK



By Jimmy Moore, Safety Program Chairperson

Henry Miles, Sr., Advisor

Paramount High FFA Chapter, Paramount High School, Boligee, Alabama

The Chapter serves seven communities—rural and towns; 27 community leaders—principals, Board of Education members, Superintendent of Education, a probate judge, county commissioners, mayors, town councils, and others—were polled for their opinion of safety needs. Meetings were held in each community to capture the public's view as well. Additionally, the CHEM WASTE facility, which is the largest hazardous waste storage site in the United States, is located 20 miles from the community. The Chapter planned safety programs to meet the needs of all families whether or not they live on a farm, which included a hazardous waste seminar. (No emergency preparedness plan was in effect a few years ago when an emergency spill occurred 1 mile from the school.) Programs were delivered each month. Publicity included newspapers, radio and TV. Evaluation of the success of each activity was completed after each activity.

Activities Completed (and community groups included):

1. Well Water Testing (County Health Department FFA members).
2. Electrical Safety Checks (FFA Members).
3. School Bus Safety Week Poster Contest (Elementary and High School students).
4. Radon Testing (FFA members Radon Hotline).
5. Monthly Fire Drills (Paramount High students) (896).
6. Monthly Tornado Drills (Paramount High students) (896).
7. Fuel Safety Decals (Paramount High students (700), Volunteer Fire Department).
8. Fire Extinguisher Demonstration (FFA members Paramount faculty).
9. Pesticide Safety (County Extension Agent).
10. National Fire Prevention Week (Fire Protection Association).
11. Propane Gas Leaks (Thermogas County FFA Alumni).
12. School Traffic Control (County Highway Department School Administration).
13. National Farm Safety Week (County Extension Agent, Local Agricultural Equipment Dealer).
14. How to Saddle a Horse (FFA members, FFA Alumni, 4-H Club, Boy Scouts, Cub scouts).
15. Hazardous Waste Disaster Seminar (Chemical Waste Management Inc., FFA Alumni, High School students).

SAFETY THROUGH EDUCATION

*By Tracy Mefford, Safety Program Chairperson
Ken Salkeld, Advisor*

Southwestern-Hanover FFA Chapter, Southwestern High School, Hanover, Indiana



Each year, a random survey of perceived safety and community needs is conducted. A number of "standard" safety programs are conducted annually. The Chapter requested information and materials on selected safety problems from agencies and organizations. Materials were reviewed for appropriateness, and new materials were designed when necessary. The Chapter delivered educational messages on selected safety topics through presentations to large school groups, civic groups, and via door-to-door to ensure that the information was within everyone's reach. Events were publicized through newspaper, radio, wall calendars, and posters. Evaluation was limited, but it was noteworthy to mention that there were no flowing grain or suffocation fatalities, fatal fires, nor serious machinery injuries since 1984.

Activities Completed (and community groups included):

1. Fire Safety Campaign (None).
2. Home Safety and Farm Machinery (None).
3. Safety Awareness Fingerprinting (Jefferson Co. Sheriff Dept.).
4. Farm Safety Coloring pages (None).
5. "Stick-A-Tractor" (None).
6. FFA Wall Calendars (None).
7. Emergency Maps of Schools (SW Administration and Maintenance Staff and local Fire Departments).
8. Hazardous Grain Handling (Purdue Coop Extension).
9. Emergency Medical Treatment: Children's booklets (Publisher, SW Elementary School and Teachers).
10. Halloween Trick or Treat Safety Bags (None).

IN THE SCHEME OF LIFE THEY SAY, 'YOU LIVE AND LEARN.'

WITH SAFETY WE BELIEVE THAT YOU LEARN AND LIVE



By Damien Lucius, Safety Program Chairperson

John Rummel, Don Rains, Advisors

Stockton FFA Chapter, Stockton R-I Schools, Stockton, Missouri

The Chapter used data from several surveys to plan programs: 1) of area high school students' drinking and driving habits 2) of chapter members' perceived need for electrical and machinery safety programs in the community and 3) of elementary teachers for elementary students' safety needs. Some community groups came to the Chapter with safety projects. The Chapter continued to implement selected programs and develop new ones to meet the needs identified in the surveys. It focused on a philosophy that safe children become safe adults. Publicity included using newspapers, radio, television, posters, and the school bulletin. An evaluation showed that the objectives were met.

Activities Completed (and community groups included):

1. Substance abuse awareness program (FHA/HERO, FBLA, Student Council).
2. Re-floor Caplinger Mill Bridge (Bridge Preservation Society, Senior Citizen Club, Stockton City Council).
3. Ambulance program (Ambulance Board).
4. Chainsaw safety (Stihl Corporation).
5. Fire prevention (Springfield Fire Department).
6. Electrical safety display (Missouri State Fair).
7. Brand'em safety (All Community).
8. Bulletin boards on safety (John Deere).
9. Halloween safety (Safety Council).
10. Electrical safety (Stockton Elementary).
11. Fire safety (Stockton FFA).
12. Underground cable safety (Missouri Telephone).
13. Combine safety (John Deere).
14. Tractor safety (John Deere).
15. Bypass starting (John Deere).
16. Safety on the farm (John Deere).
17. Fire extinguisher use (Stockton High School).
18. Environmental safety (Department Natural Resources).
19. Pesticide safety (ASCS).
20. Hunter and gun safety (Missouri Department of Conservation).
21. Boat and water safety (Missouri Water Patrol).

PERSONAL SAFETY IN YOUR LIFE

*By Gary Brumfield, Safety Program Chairperson
Charles E. Miller, Advisor*

Amanda-Clearcreek FFA Chapter, Amanda-Clearcreek High School, Amanda, Ohio



The safety committee received input on community needs for safety programming from squad chiefs and fire chiefs from Clearcreek and Amanda Townships and a representative from the Sheriff's department. Others interested in safety issues were identified from local emergency services and listings of government agencies. The community is made up of villages and rural areas. A general meeting of all people and agencies with interest in safety areas was held to plan activities. The chapter involved as many members of the community as possible. The primary focus of the year was injury prevention. Publicity included newspaper articles, radio and TV, posters, pamphlet distribution, displays, demonstrations, and speeches.

Activities Completed(and community groups included):

1. Fire Extinguisher Safety Program
(Clearcreek EMS, AC FFA, Nation Fire Prevent, Humes Extinguisher Service).
2. Farm Safety Week (SKY MED, Clearcreek Fire/EMS, Amanda Fire/EMS, Coop Extension Service, AC FFA and Young Farmers).
3. Farm Safety for "Just Kids"
(Farm Safety for Kids program, AC FFA Children's Hospital, Clearcreek EMS).
4. Hazardous Farm Chemicals for Joint Fire District (Hazard Committee Sheriff's Department
All County Fire Districts, Coop Extension Service, AC FFA).
5. Chemical Safety for Farmers
(Monsanto Company Hazard Committee, AC FFA and Young Farmers).
6. Fire Safety Week
(Clearcreek EMS, Humes Extinguisher Service, AC FFA).
7. Equipment Safety Program
(John Deere-Lifer, Clearcreek EMS/Fire, Amanda EMS/Fire, AC FFA and Young Farmers).
8. Farm Accidents Seminar for Squads
(Children's Hospital, AC FFA, Lifer-John Deere, Lancaster-Fairfield Hospital).
9. 911 - System Operation
(Sheriff's Department, Clearcreek Fire/EMS, Amanda Fire/EMS, AC FFA).
10. "Code-4" Car
(Amanda Fire/EMS, Sheriff's Department, State Highway Patrol, Student Council).
11. Poster Contest (Farm Safety for "Just Kids," Clearcreek EMS, AC FFA and Young Farmers).
12. Health Screening - Blood Pressure, Cholesterol
(Lancaster-Fairfield Hospital, Amanda EMS, Clearcreek EMS, AC FFA and Young Farmers).
13. Bloodmobile (Lancaster-Fairfield Hospital, Red Cross, AC FFA).

STRESSING SAFER CAMPUS, HOME, AND COMMUNITY THROUGH EDUCATION



*By John Barragan, Safety Program Chairperson
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Ysleta FFA Chapter, Ysleta High School, El Paso, Texas*

The advisors and the safety committee assessed local and national trends and their impact on El Paso. (Example: because of proximity to Mexico, rabies is a safety concern to domestic animals.) More than 100 community members were surveyed and participated in neighborhood polls to determine community needs as they relate to safety. Results of the community survey were tabulated and analyzed. Chapter officers and the safety committee Young Farmers, FFA Alumni, and the agricultural advisory committee to help determine priorities. Monthly safety programs were scheduled. Local and state resource people were contacted as speakers. FFA members met with outside groups to outline cooperative efforts in safety projects. Materials for programs were obtained. Media including TV, radio, and newspapers were contacted to inform them about activities planned throughout the year and to gain their support.

Activities Completed (and community groups included):

1. ATV/3-Wheeler Seminars (Ysleta Young Farmers).
2. Rabies Control Field Seminars (Alumni, Humane Society, Local Veterinarians).
3. "Brand Um" Campaign (El Paso Equipment Dealers).
4. Pecan Pesticide Safety Awareness (Young Farmers, Extension Service).
5. Adoption of Machinery for Safety Features (El Paso Equipment Dealers).
6. Gun Safety Workshop (D.P.S., Student Council).
7. Agricultural Products/Hazards Inservice (T.D.A., El Paso Food and Fiber Council).
8. Water Quality Testing (Lead) (YISD Administrative Council, City Council).
9. Fire Extinguisher-Fire Safety Inservice
(Ft. Bliss Firefighters Association, Industrial Technology Club).
10. Cardio-Pulmonary Resuscitation Workshop (Young Farmers and Alumni).
11. Planned Public Relations Campaign (Local media, local press club, Young Farmers).
12. Color Coding/Eye Protection Updating (Standard Paint Company Alumni).
13. Educational Programming (El Paso County Health Association).

COMMUNITY SAFETY: TAKING THE LEAD IN SOUTH HILL

By George Basherville, Safety Program Chairperson

E.C. Conner, R.A. Thomas, Advisors

Park View Senior FFA Chapter, Park View Senior High School, South Hill, Virginia



The chapter safety committee met with school officials, school club representatives, and community organization representatives to coordinate a community safety plan. Newspapers, radio, and surveys were used to poll the general public for their concerns. After data were collected, a list of suggested activities was developed and taken to chapter members. FFA members and some community members met to decide which projects would be completed during the year. Activities were scheduled monthly and tied into seasonal events when possible. Publicity included newspaper, radio PSA's, exhibits, posters, and school intercom announcements.

Activities Completed (and community groups included) were a:

1. Repairs and inspection of children's Playgrounds (None).
2. Fire extinguisher inspection (South Hill Volunteer Fire Department).
3. Farm safety exhibit (None).
4. Shop safety test (None).
5. Color coding of shop (None).
6. Boating and water safety display (South Hill Chamber of Commerce).
7. Hunter education courses(South Hill American Legion).
8. Served as pilot school senate drug program (None).
9. Ford/New Holland tractor safety program (None).
10. Sports A Field Day (Mecklenburg 4-H).
11. Tie One On ribbon program (SADD Chapter).
12. Chainsaw safety course (South Hill Ruriton Club).
13. Vials of life (Signet Bank).
14. Electrical wiring program (PV Young Farmers).
15. Restricted use pesticide recertification (Virginia Coop Extension Service).
16. Distribution of Pesticide Container test kits (Conner Claims Service).
17. Formation of Jr. Town Council (South Hill Chamber of Commerce).
18. Home safety hazard hunt survey (Friends of R.T. Arnold Library).
19. Lawnmower safety program (Mecklenburg Chapter American Red Cross).
20. After-prom party (SADD Chapter).
21. Boating safety course (Virginia Game Commissions).
22. Public service announcements on seatbelts (None).
23. Fire safety course (Mecklenburg Department of Forestry).
24. CPR classes(Southside Rescue Squad).

A.L.I.V.E. (AWARE LEADERS INSTILLING VITAL EDUCATION) IN SAFETY



*By Dan Pearson, Safety Program Chairperson
Mike Hickman, Christi N. Renz, Tim Schneider, Advisors
Elma FFA Chapter, Elma High School, Elma, Washington*

The community was defined as that area served by the Elma School District, which included two towns and three unincorporated communities. Needs assessment meetings were held with the chiefs of Police, city councils, American Red Cross, Seattle Parks and Recreation, Seattle Canoeing Club, and other community groups and service organizations in each of the five areas to be served. The primary safety problems found were traffic safety related to drinking and driving and low seatbelt use. In addition, no boating safety course existed in the Eastern Grays Harbor community. The chapter analyzed each phase of the program for effectiveness and improvement and worked together with other community groups to avoid duplication of efforts. FFA members were involved as frequently as possible, especially during activities conducted in the schools. Publicity efforts included newspapers, presentations and television.

Activities Completed (and community groups included) were a:

1. Boating Safety - Instruction of Classes (Washington Parks and Recreation Commission, Seattle Park and Recreation, Seattle Canoeing Club, Summit Lake Community).
2. Elementary Presentation (Washington Parks and Recreation Commission, and Elementary School).
3. FFA Members Recreational Outing (Wynathchee Lake State Park).
4. Holiday Awareness Program - Assembly and Information Distribution (Elma D.A.R.E. program, S.A.D.D., Washington State Traffic Commission, Elma Police Dept., Whiteside Funeral Home, High School ASB).
5. FFA Meeting Featuring Safety - Hunting Safety, Job Site Safety (Washington Department of Wildlife, Morton Thiokol International, Ventron Division).
6. Elementary Safety Week - Mr. Egg and Seatbelt Safety - Fire Prevention Safety (Washington Traffic Safety Commission, Elementary School, Elma Fire Department, Aberdeen Fire Department, Featuring EDDE the Robot, Elementary School).
7. Personal Emergency Safety and Inspection of Ambulance (Elma Fire Department, Aberdeen Fire Department, Elementary School).
8. Electrical Safety (Grays Harter PUD - Elementary School).
9. Bicycle Rodeo (Elma Police Department, Washington State Patrol, Washington Traffic Safety Commission, Burger Elementary School).
10. Safety Poster Contest (Elma Police Department, Washington State Patrol, Washington Traffic Safety Commission, Burger Elementary School).
11. State Safety (Washington State Traffic Safety Commission).

AGRICULTURE CHEMICAL SAFETY

*By Stason Ikenouye, Safety Program Chairperson
Jack Smith, John Stahley, Advisors*

Platte Valley FFA Chapter, Platte Valley High School, Kersey, Colorado



We performed a safety program on March 26, 1991. In order to perform a mock chemical spill, we contacted several organizations. They consisted of the school board, the Kersey and Greeley fire departments, the state patrol, Kersey police, health department, the mayor of Kersey, town council, Platte Valley Elementary, and High School, Centennial Ag, HAZ MAT Team, EPA, Administration, two newspapers, radio, TV (news). We attended a Fire Department meeting, town council meeting, board of education meeting, and we held a meeting which consisted of the head of personnel, of every organization we listed above. The mock chemical spill began with a truck driver who was encountered by a heart attack, he lost control and the truck unfortunately went out of control and tipped over in the high school parking lot. Letting the chemical inside the tanker spread onto the parking lot contaminating, and injuring people trying to get into their cars. The first person that discovered the spill was our principal, Ms. Swain. The next person contacted was the Kersey police, followed by Mr. Hanson, administrator, Kersey Fire Department, EMT, Sheriff Department, Greeley Fire Department, and finally the State Patrol.

Activities Completed were a:

1. Hazardous Chemical Spill Safety Simulation.
2. Hunters Safety Course.
3. Safety Tests.
4. Safety Films.
5. Safe Operation and use of Machinery.
6. Safety Review of Shop Equipment.
7. Arc Welding Safety.
8. Oxy Acetylene Welding Safety.
9. Power Tool Safety.
10. Engine Safety.
11. Electrical Safety.
12. Tractor Bypass Starting Safety.
13. Tractor PTO Safety.
14. Lawnmower Blade Safety.
15. Riding Lawnmower Safety.
16. Tractor Rollover Safety.

SAFETY FOR EVERYONE IN '91



By David J. Summers, Safety Program Chairperson-1991

Stephanie Moore, Safety Program Chairperson-1992

Dale McQuillen, Advisor

Lake Placid Senior FFA Chapter, Lake Placid High School, Lake Placid, Florida

Our programs provide safety awareness from pre-school to adults with families and homes, and even in their jobs. We believe our program will make the community more aware of safety and make it a common, everyday practice. Our group focused a great deal on younger children. We tried to aid in their protection by issuing identification stickers and tags, and providing home safety material on young children to their parents. All students in our high school are required to take and pass the Red Cross CPR course and test. This training will last a lifetime and possibly save a life. We have told tractor operators in the community of the dangers of tractors and gave ideas on safety around them. The department has taught students proper safety of various shop tools and lawn equipment. Animal handling has been taught in classes in effort to prevent injury to handler or the handler. Chemical safety is also an issue pursued by the department and each ag student is taught safety around chemicals. The Lake Placid Senior FFA Chapter of the National FFA, hopes that their involvement and assistance with the community and its safety will make Highlands County a safer and healthier place in which to live and work. By conducting our various and many programs in safety, we hope that our community will always remember to keep safety in mind and be safe.

Activities Completed (and community groups included) were a:

1. Identification Stickers (County Elementary School Staff).
2. Chemical Safety (Extension Service).
3. Tractor Safety Program (National Sticker Program, local tractor owners, passed out safe-packets).
4. Small Gas Powered Engine Equipment (Extension Service, Local and State).
5. Seat Belt Safety (Florida Highway Patrol, High School).
6. Animal Safety (4-H and FFA Members of Highlands County).
7. CPR Training (LPHS Staff).
8. Home Safety (State Extension Staff, Local Business).
9. Home Safety Demonstration (Extension Staff, LPHS Staff).
10. Electrical Safety (Florida Power, Lake Country Elementary).

HUNTER SAFETY AND AGRICULTURAL WORK-SITE SAFETY

By Kerry Courchaine, Safety Program Chairperson-1991

Keith Mitchum, Safety Program Chairperson-1992

Scott M. Carey, Bruce Thomas, Advisors

Newton County FFA Chapter, Newton County High School, Covington, Georgia



For the past three years our chapter has placed emphasis on safety for our members and the community. Our FFA officer team identified the chapter and community needs. This year we planned to diversify our safety program and expand it. Our first major area was hunter safety program. As a part of our hunter safety program we invited a local game warden to our school. Mr. Roy Morris presented a program on hunter safety. We also began an education program in the school concerning requirements for obtaining a hunting license. Our second major area of emphasis this year was agriculture safety on the farm. From our community survey and the local farm bureau, we found some problems in Newton County. We began our program during National FFA Week by declaring one day as Safety Day. During Safety Day, Ms. Beck Tyles from the Georgia Farm Bureau presented a program on agriculture safety on the farm. Students were educated on hazards on the farm and how to correct them. Each student was given literature on hazards and ways to prevent them. The next step of our program was to put in action the information learned by the student. Our chapter prepared a safety tour of two farms and an agricultural business. On this tour, we utilized a safety packet produced by Progressive Farmer. The packet contained safety material, stickers, evaluation and tagging devices. At each location we explained our purpose to the owners and students marked and tagged hazards. At the agriculture business, students were shown up to date safety devices on agricultural equipment. One of the farms was a former FFA member. Upon completion follow-up survey's were completed. Our chapter also viewed safety films on various topics during FFA Safety Week. To remind community members to keep safety on their minds at all times, the chapter constructed two signs. These signs were placed on the roadways entering Newton County. The theme on the sign was Prevent Accidents, Act Safely. Chapter members erected the signs so citizens of Newton County would be reminded of safety.

Activities Completed (and community groups included) were a:

1. Hunter Safety Program (School).
2. Community Survey.
3. Safety Awareness Day (High School).
4. SMV Sign Distribution (Farm Bureau).
5. Safety Vest Sale (Farm Bureau).
6. Livestock Chute Demonstration (Local Farmers).
7. Hunting Licence Certification (Georgia Department of Natural Resources).
8. Classroom Safety Pretest.
9. Classroom Safety Post Test.
10. Greenhouse Chemical Safety Program (Georgia Department of Agriculture).
11. Safety Film Fair.
12. Georgia Farm Bureau Safety Program (Farm Bureau).
13. Safety Tour: 1) Ballard Farms, 2) Marks Dairy, 3) Hay's Truck and Tractor (Local Farmers).
14. Follow-up Survey (Progressive Farmer).
15. Construction of Safety Sign Upon Entering Newton County (Farm Bureau, State FFA Camp).

SAFETY AWARENESS IN THE COMMUNITY



*By Michael Hawkins, Safety Program Chairperson
Milt Luckstead, Jr., Advisor*
Cascade FFA Chapter, Cascade High School, Cascade, Iowa

At the end of each year our safety committee and FFA members evaluate the past years program. The evaluation is used to help determine the needs of the safety program for coming years. After our safety committee is selected, they sit down and decide which activities will best promote safety in the Cascade area. FFA members always look for new ideas to improve existing safety programs. This year we were able to add lots of media coverage, an elementary program, and cooperated with Mercy Health Center to improve safety awareness. Once the safety committee has met they split up duties among FFA members, to contact necessary people. For example, the elementary safety program was coordinated through Marilyn Adams and the Cascade Elementary staff. FFA members contacted these people and set up the time and place to conduct the meeting. Other FFA members met together to put a program together. Our safety program begins each year by examining the previous years evaluation. Plans are made for the coming year. Keeping in mind short and long term goals. At the end of the year another evaluation takes place. Continuity and organization are keys to keeping "Safety Awareness in Our Community" a priority program.

Activities Completed (and community groups included) were a:

1. Health and Safety Walkabout (Mercy Health Center).
2. Safety Messages on Silo Bags (Community Members).
3. Safety Meeting (Cascade Elementary Farm Safety for "Just Kids").
4. 5th Grade Safety Poster Contest (4 Elementaries).
5. 300 Safety Stickers Handout Out and Applied (Community Members).
6. Tractor Safety Driving Contest (Alumni Members).
7. Water Safety (Board of Supervisors, Health Board, Extension Service, County High Schools).
8. Chainsaw Safety Demonstration (Dave Stevens, Chainsaw Dealer).
9. Public Service Announcements (KDTH Radio Station).
10. Hunter Safety Classes (Twin Rivers Pheasants Forever, High School Administration).
11. Trapshoot Safety Demonstration (Community Members).
12. Safety Films (High School Administration).
13. Membership (Farm Safety for "Just Kids", Iowa Farm Safety Council).
14. Shop Safety (High School Administration).
15. TV Interviews (KDUB, Channel 40).
16. National Farm Safety (Area Business, Local Paper).

SAFETY SPRAYER TUNE-UP

By James A. Pavlik, Safety Program Chairperson

Gary L. Hansen, Kevin Randa, Advisors

Verdigre FFA Chapter, Verdigre Public School, Verdigre, Nebraska



During one of our FFA meetings, the chapter came up with suggestions for possible safety projects. The safety committee and chairman, James Pavlik, looked into the projects and a list was posted for all members to view and consider for possible ideas. At a FFA meeting, the chapter discussed and voted on the activities to be conducted for the year. The Sprayer Tune-Up Kit was not the chapters first choice for our main safety activity. We first contacted our local EMT Unit to put on a safety demonstration and film with the help of jaws-of-life. They couldn't do the demonstration until spring. A safety specialist was consulted about presenting a PTO demonstration on safety and care that should be used around this type of equipment. Local EMT's were also to take part in this demonstration, however, due to conflict in dates this project was not completed. We then came in contact with the sprayer project and being mainly a rural area, we felt this project would be a very needed subject area for our community. The response was great in helping us and very positive. The people felt the training they received at the CO-OP's Sprayer Tune-Up day held February 18th was beneficial. The CO-OP also held a sprayer calibration demonstration for chapter members.

Activities Completed (and community groups included) were a:

1. Sprayer Tune-Up Week Kit (Verdigre CO-OP, ZOBJ Hall, Verdigre Elevator).
2. Cement put in pipes of BOAC fence project (Verdigre School Board, Town Board, Verdigre School Insurance).
3. Film "Can You Get Out" (School Nurse, Fire Marshall).
4. Safety Articles (Safety Committee).
5. Safety Films (Ag Ed Class, Safety Committee).
6. Ag Shop Evaluation (School, FFA, Ag Ed Classes).
7. Emergency information ad in local paper (Safety Committee).
8. Safety Goggles (School, FFA).
9. Articles on Bulletin Board (FFA, School).
10. Safety Application (FFA).
11. School Bus Stop Signs (School Bus Drivers, Supervisor, FFA).

KEEP HARM OFF THE FARM

By Chad J. Heit, Safety Program Chairperson-1991

Jason Heinz, Safety Program Chairperson-1992

Cliff Orgaard, Advisor

Rolette FFA Chapter, Rolette Public School, Rolette, North Dakota



Our goal is to prepare each member to be a safe and well informed member of the community. We carry out a variety of activities and involve several members of the community and alumni to increase the interest level and impact upon the members. Also, since Rolette is a fairly small community, we make every attempt to cooperate with other organizations for our mutual benefit. For instance, by working with the Ambulance Squad, we helped them qualify for a \$1,500 grant. We live in a rural area that relies almost exclusively on production agriculture for its income. Almost all students live and/or work on a farm and use farm equipment. During 1990, at least three farmers in our community had farm related injuries. Fortunately they are all recovering, but it made us aware of the importance of continued training in safe practices and emergency first aid. Even though no formal survey was developed, we feel we met the needs of our community by carrying out the activities that we did.

Activities Completed (and community groups included) were a:

1. Tractor Safety Course to Eighth Grade Students (Rolette Insurance Agency).
2. Ambulance Demonstration (Rolette Emergency Medical Services Personnel).
3. Machinery Safety Video Presentation (County EMS Personnel).
4. Community-Wide Farm Safety Program (Rolette EMS, Johnson Oil, Rolette Bank, A of G Church, City Medical Officer).
5. Weight Room Renovation (School Board Athletic Department).
6. Gun Safety Demonstration (FFA Chapter).
7. Sponsorship of Post-Prom Party (All Rolette Businesses).

SURVIVING WITH SAFETY

By Amy Tucker, Safety Program Chairperson-1991

Charlotte Kreier, Safety Program Chairperson-1992

Brenda J. Scheil, Advisor

New Auburn FFA Chapter, New Auburn High School, New Auburn, Wisconsin






We are concerned with our present generation and future generations so we concentrate on including safety topics which would be significant to lives of all ages. We also realize that among our varied age groups we must also meet the needs of a diversified population and we believe we do this through our safety program and safety campaign efforts. When we selected major safety topics we included; National Farm Safety, School Bus Safety Promotion, Tractor Safety Certification, Bicycle Safety, School Shop Safety and Poison Prevention. By adding additional safety topics through the year our safety program maintains diversity and safety then becomes an on-going and continual concern. Our new emphasis this year was "Outdoor Power Equipment" and we also painted our playground equipment on our school grounds. If we were to table our safety program and make no effort to promote safety...dangerous situations would be an even greater threat to our community. We believe that as time progresses our safety program becomes even more preventative. We want to prevent dangerous situations and accidents before they happen. By carrying out our preventative programs we are building positive safety records and this is a continual goal which will hopefully become a long-term record. It is our long-range goal within our long-range plan to have a program set up for each level in the pre-school, grade school and high school in addition to safety programs geared to our adults within our community. By building our base program of safety we will eventually be able to present programs of safety to all community organizations on a rotating basis in order that once a year each community group would hear at least one different safety topic from us. This would build stronger ties within our community and FFA would always remind each person of safe attitudes and actions. "Surviving with Safety" does not happen without dedication.

Activities Completed (and community groups included) were a:

1. Tractor Safety Program and Contest (Extension Office, Neighboring Chapter).
2. National Farm Safety (Local Businesses).
3. School Announcements (School Staff and Administration).
4. Bicycle Safety Education Program (Fifth Grade Class).
5. Paint Playground Equipment (School Personnel).
6. Gas Weed Eater Safety (FFA Members).
7. Lawnmower Safety (Northstar Implement).
8. Fall Harvest Safety Presentation (FFA Alumni).
9. Seatbelt Safety (Department of Transportation).
10. Eye Safety Emphasis (FFA Members, Faculty Members).
11. Laminate Posters (FFA Members).
12. FFA Safety Booth (FFA Members, Lion's Club, FFA Alumni).
13. "Mr. Yuc" Poison Prevention Program (Luther Hospital, Elementary School).
14. Safety Preparation for Maintenance Personnel (Simplicity Lawnmower Company, FFA Members).
15. View Safety Films, Videos and Filmstrips (FFA Members, Organization from which they were obtained).

VIDEO TAPE PRESENTERS

TITLE	SOURCE
Idaho	
<i>Farm and Ranch Equipment Safety</i>	Idaho Cooperative Extension Agricultural Communication Center 10 Agricultural Science Building Moscow, ID 83843-4196 (208) 885-6436 or FAX (208) 885-6654
Illinois	
<i>Safe Country</i>	County Companies Insurance Community Education P.O. Box 2020 Bloomington, IL 61702 (309) 557-2836 or FAX (309) 829-9430
Iowa	
<i>Agriculture at Risk</i>	Audiovisual Center University of Iowa C215 Seashore Hall Iowa City, IA 52242 1 (800) 369-IOWA or FAX (319) 335-2507

Making Connections

Farm Safety for Kids

Farm Safety for "Just Kids"
P.O. Box 458
130 East First
Earlham, IA 50072
(515) 758-2827 or FAX
(515) 758-2517

Rural Health Series Tape

#1 *Agricultural Traumas*

#2 *Pesticide Toxicology*

#3 *Agricultural Respiratory Disease and
Skin Diseases of Agricultural Workers*

#4 *Zoonotic Diseases #1*

#5 *Zoonotic Diseases #2*

Jacqueline Snider
Information Resource Center
University of Iowa
124 AMRF-Oakdale Campus
Iowa City, IA 52242
(319) 335-4427 or FAX
(319) 335-4225

Nebraska



Farm Machinery Accidents

Lincoln Medical Education
Foundation
4600 Valley Road
Lincoln, NE 68510-4844
(402) 483-4581 or FAX
(402) 483-4184

#1 *Auger Rescue*

#2 *PTO*

#3 *Crushing Injury*

Rollin Schnieder
Cooperative Extension
Institute of Agriculture and Natural
Resources
221 West Chase Hall
University of Nebraska-Lincoln
Lincoln, NE 68583-0771
(402) 472-2824 or FAX
(402) 472-6338

New York



FARMSAFE Series

- #1 *Agricultural Injuries and Children*
- #3 *Recognizing Workplace First Response to Farm Injuries and Reporting a Farm Accident*
- #4 *Personal Protective Equipment*
- #5 *Tractor Overturns*
- #6 *Electrocution Hazards*
- #7 *Job Safety Analysis and Risk Taking Demonstration*
- #8 *Safety on the Farm, But off the Job*
- #9 *Respiratory Hazards on the Farm*
- #10 *Power Take off Injuries*
- #11 *Farm Family Stress*
- #12 *Economic Impact of Farm Injuries*

New York Center for
Agricultural
Medicine and Health
One Atwell Road
Cooperstown, NY 13326
(607) 547-6023 or FAX
(607) 547-6087

Vermont



It Can't Happen to Me

UVM Extension Service
Office of Information
Morrill Hall, UVM
Burlington, VT 05405
(802) 656-3024 or FAX
(802) 656-8642

Wisconsin



Grant County Farm Injury Statistics

Linda Adrian
Grant County Nurses Office
111 S. Jefferson Street
Lancaster, WI 53813
(608) 723-6416 or FAX
(608) 723-2377

How to Have an Accident

Cooperative Extension Media
Collection
Bureau of AV Instruction
1327 University Ave.
Madison, WI 53715-2491
(608) 262-1644 or FAX
(608) 262-7568